

# Half Life

## Overview

### Title

Half Life

### Genre

Action/Adventure 1<sup>st</sup> person perspective

### Developer

Valve Software

### Positioning

Half-Life is the thinking gamers ultimate first person perspective action game!

You must think on your feet to fully exploit the plot twists and relevant storyline. With beautiful vibrant graphics, Half-Life provides a realistic eerie looking immersive experience which does not detract from the fun of blowing away the opposition.

The above statement reflects all the key elements of the game which set it apart from this increasingly crowded genre. Not only does Half-Life include the shoot 'em up elements from classics like Quake and Duke Nukem, but also it gives the player a chance to use brainpower with the puzzles and adventure elements which have been incorporated. By combining these, the target audience can be increased to include other gamers, thus widening the appeal and making Half-Life a step ahead of the opposition.

### Product Data

#### Format: PC CD ROM

Windows'95

3D Acceleration support

32 Meg RAM

P166

Multi-player support for up to 8 players over LAN

### Ratings

Rating Body	Submission Date	Rating Expected
ELSPA	To be submitted ASAP	15 years

# Half-Life Alpha .61 Notes

You can run Half-Life by running the supplied batch files (Half-Life.bat and Half-Life GL.bat), which will launch you into the map C1a0, or you can run engine.exe and enginegl.exe, which will leave you at the console. See below for some useful commands you can use from the console.

The GL version of the batch file tries to set up appropriate 3DFX variables for performance and quality before launching enginegl (if you aren't using a 3DFX card for your OpenGL accelerator, these won't do anything). You can have arguments to the engine (like +exec gaben.cfg or +map c1a3) that are just console commands with a "+" in front of them. For example, Half-Life GL.bat should have a line like "enginegl +map techdemo +exec gaben.cfg -width 640" in it. The -width 640 is unnecessary and just is overkill to make sure the engine runs in 640 by 480 mode.

Many 2D video cards, especially ones with S3 chipsets crash upon launch of fullscreen mode, at this time. If you get an error such as "Graphics mode not supported", "MGL fatal error", or "Missing graphics driver" try the following: Go into the Half-life folder, right-click on the engine.bat file, select the 'properties' option, uncheck the 'read-only' format, check the 'archive' box, click 'apply', and then 'OK.' Right-click on the 'engine.bat' file again, select the 'edit' option, type in '-startwindowed' after +map c1a0, then click 'OK'. Then run the 'engine.bat'. If this doesn't work, you are out of luck as of build .61.

If you have a slow machine and can't jump up something or climb a ladder because of slow frame rate, try reducing your resolution by going to a smaller video mode. How to do this is detailed at the bottom of the document.

By default, the batch files exec a file, gaben.cfg, in addition to the default, autoexec, and config.cfg files. All CFG files are text files. You can create your own configurations and run them either by replacing the line "+exec gaben.cfg" in the batch files, or by typing "exec <yourname.cfg>" at the console.

**BINDING FUNCTIONS TO KEYS:** You can also type in and change individual keys and console commands at the console by typing: "bind <space> <Key name> <space> +<console command>". For instance, bind ins +duck, binds the insert key to the crouch/duck function. After typing it in press<Enter> to change the setting.

**GABEN.CFG, DEFAULT.CFG, AND CONFIG.CFG** current settings:

- ~ - brings up the console and makes it go away
- escape - brings up the menu system

- uparrow- go forward
- downarrow - go backward
- leftarrow - strafe left
- rightarrow - strafe right
- mouse movement turns you up and down and left and right

- end - jump
- control - crouch (+duck to bind it to something else)
- shift - use (good for opening drawers, fuse closets, and getting health from med-kits)

insert—This will bring up a list of weapons you currently have. Subsequent clicking of the button will cycle through the weapons. Left-click with the mouse to select the

weapon you want.

/--toggles 'impulse 101' which gives you the pistol and submachine gun/grenade launcher. Hit it anytime you want to reload. You can also bind this from the console.

- q - toggles invulnerability
- r - toggles invisibility

- z - make gun visible
- x - make gun invisible (useful for screen shots)

- n - noclip (lets you move around without touching anything)
- h - makes everything really bright (called fullbright)
- j - turns off fullbright

- l - toggles the trace lines in the grunt room so you can see the AI

key 1 - toggles your flashlight

- keys 2,4 - this followed by a click of the left mouse button is how you select weapons
- keys 5-0 - make various noises so you can show off the DSP effects
- backspace - stops the CD from playing
- mouse button 1 - fires your weapon (or selects it if you've typed 2 or 4)
- mouse button 2 - uses your weapons secondary attack (only on machine gun now)
- mouse button 3 - spray paints the Half-Life logo on the wall
- keys F1- F11 - play songs off of the CD
- key F12 - takes a snapshot of the screen and saves it to your Half-Life directory

- tab - slow motion
- shift - normal motion

If you bring up the console by typing ~ (the console is the thing that looks like command.com), you have some other useful commands:

Use- on scientist makes him follow you. Sometimes they get stuck. You need them to trigger some doors with you, as in the two pads on the floor in c1a1b.

- restart - restarts the level
- maps - lists all the maps in the valve\maps directory
- quit - good for escaping the occasional ugly situation

playdemo <demfile> - there are a number of \*.dem files you can run to see recordings of game action, such as c1a1, dem1, etc...

vid\_describemodes - lists all of the modes Half-Life can run on your machine

vid\_mode <modenumber> - switches to that video mode

You can also change the configuration of keys by being in the game and hitting the Esc key, which brings up the user menus. One of the menus is Options, and you can look in their to change which keys do what. This behaves pretty much the same way Quake type games do, so it should be familiar.

## Keys and Cheats

Maps - Brings up a list of all maps, pageup & Pagedown enables you to view list

Type at the console:

map mapname  
to change to that map

In the config.cfg in \sierra\half-life\valve directory, you must change - m\_pitch  
“-0.022” - to -m\_pitch “0.022” to turn off invert mouse. Copy the gaben.cfg file from  
the floppy into the \sierra\half-life\valve directory and say yes to overwrite..

Once loaded bring down the console and type:

exec gaben.cfg  
this will bring up the following controls;

SPACE	-	JUMP
B	-	USE/OPEN
E	-	MOVE FORWARD
D	-	MOVE BACK
S	-	MOVE LEFT
F	-	STEP RIGHT
G	-	MOVE UP
V	-	MOVE DOWN
CTRL	-	DUCK
MOUSE 1	-	FIRE (NORMAL ATTACK)
MOUSE 2	-	FIRE (SPECIAL ATTACK - ONLY ON SOME WEAPONS)
MOUSE 3	-	GIVES ALL WEAPONS & RELOADS
/	-	GIVES ALL WEAPONS & RELOADS

H	-	FULL BRIGHTNESS
J	-	NORMAL BRIGHTNESS
L	-	TORCH
N	-	NOCLIP (COLLISION OFF)
Q	-	GODMODE
R	-	NOTARGET
C	-	HIDE WEAPON
X	-	SHOW WEAPON
Z	-	SPRAY LOGO (FOR DEATHMATCH)
TAB	-	SLOWMOTION
SHIFT	-	NORMAL MOTION
F12	-	CREATES A .BMP OF CURRENT SCREEN
. (fullstop)	-	THROWS GIBS OUT

## Level Codes

c0a0	c2a2g	<b>c4a1c</b>	alien_zoo	squid
<b>c0a0a</b>	c2a2h	<b>c4a1d</b>	chumtoad	stevet
<b>c0a0b</b>	c2a2i	<b>c4a1e</b>	church	stukatest
<b>c0a0c</b>	c2a2j	<b>c4a1f</b>	cliff	techdem
				o
c0a1	c2a3	<b>c4a1g</b>	dcdm5_hl_	test
c0a2	c2a3a	<b>c4a1h</b>	dm3hl	timer
c0a3	c2a3b	<b>c4a1i</b>	env_beam	traincar
c1a0	c2a3c	troom_a	fx	vs1_1

c1a0a	c2a3d	troom_b	g_zoo	vs1_2
<b>c1a0b</b>	c2a4	troom_b2	<b>gc0a1</b>	vs1_3
c1a1	c2a4a	troom_c	geo1x	vs1_4
c1a1a	c2a4b	troom_d	geo2x	vs1_5
c1a1b	c2a4c	troom_d2	geo3x	warez_d m
c1a1c	c2a4d	troom_e	geo4x	zoo
c1a1d	c2a4e	<b>troom_e 0</b>	get	c0_tun
c1a1e	c2a4f	<b>troom_e 2</b>	glass	barnacle
c1a2	c2a4g	<b>troom_e 3</b>	gruntdm1	building3
c1a2a	c2a5	<b>troom_f</b>	het3	<b>agrun</b>
c1a2b	c2a5a		hldm1	<b>alien01</b>
c1a2c	c2a5b		houndz	<b>atest5</b>
c1a2d	c2a5c		kiosk	
c1a3	c2a5d		ladders	
c1a3a	c2a5e		leech	
c1a3b	c2a5f		leech2	
c1a4	c2a5g		lights	
c1a4a	c3a1		loader	
c1a4b	c3a1a		loot1	
c1a4c	c3a1b		lounge3	
c1a4d	c3a1c		maindemo	
c1a4e	c3a2		maze	
c1a4f	c3a2a		mldm1	
c1a4g	c3a2b		models	
c1a4h	c3a2c		movietr2	
c1a4i	c3a2d		path	
c1a4j	c3a2e		polyrobo	
c2a1	c3a2f		proto_1	
c2a1a	c3a3		proto_2	
c2a2	c3a3a		roach	
c2a2a	c3a3b		scrap_1	
c2a2b	c3a4		scriptai	
c2a2c	c3a4a		silodemo	
c2a2d	c4a1		spot_me	
c2a2e	c4a1a		sprzoo	
c2a2f	<b>c4a1b</b>		squad2	

## Good Levels to Play

MAPS—Many maps do not have transitions to other maps. You will need to load maps manually in the console by typing “map <space> <map name>” e.g. “map c1a0”. Some maps crash on launch and some you are stuck when the level loads. ‘Ducking/crouching’ or using ‘noclip’ sometimes works to get you out of this mess.

For Half-Life I’ve listed the best maps with a brief description, if they have a cool demo as well I’ve given the demo name also. To play a demo you need to bring up the console, type playdemo c1a1 (for example):

MAP C1A1 - Very first map, in room with scientist and sirens going off

MAP C1A2A - Good for showing off moving blocks and stuff, demo is same.

MAP C1A3A - Level with the gat gun, need to turn right, then left, use noclip (N) and move up to see the gat gun (on ledge). Demo for this level is really long and shows off loads of stuff like running through vents etc..

MAP C1A2B - Good level for showing off the water effects, the demo is really good for this also.

MAP C2A4 - Start level on lift, moving up to face three grunts.

MAP C2A4A - accessed thru C2A4 good for showing AI of grunts.

The following maps C3A1, C3A2 and C3A2A all have the monster in it that spits out hornets if you want to show them off. The demo C1A2B is cool because it shows the freezer and ice off quite well.

Below is a list of most of the maps and what kind of stuff they have in them:

C1a0—starting level, lab

C1a0a—lab before it blows (no transition to c1a0b, so manually load from console)

C1a0b,c—blown up lab

C1a1a—passages and lots of headcrabs

C1a1b—elevator with headcrabs dropping on you, lots of watery passages.

C1a1c—room with grinding gears and crate conveyor

C1a1d—move and break boxes with weapons/lift.

C1a2—hang

C1a2a,b—fun in offices with scientists and headcrabs.

C1a2c—freezer with slippery ice.

C1a2d—try and jump/climb up ladder. It's a bitch.

C1a3—welcome to your first mini-gun

C1a3a—vents and mini-guns

C1a3b—phlegm-shooters and crabs. Nice.

C1a3c—CRASH

C1a4b—tentacle creature. Inanimate.

C2a1—train tunnels. Cool.

C2a1a—lots of bad guy troopers.

C2a3a—tunnels with water and crabs.

C2a4—CRASH

C2a4a-c—Canyons and buildings outside. Looks good.

C2a4d—CRASH

C2a5a,c—Outdoors: Roman architecture and cowboy southwest backdrop.

C3a1,a—communications center

C3a1b—Satellite dish

C3a2,a—X-lab

C3a3c—THX sound system. Doesn't work though.

Geo1-4—Cool desert base.

Models—models of guns, ammo, etc.

Sfan—Close encounters of the human assault kind.

demons

# Level Walkthrough

## **THE PORTAL DEVICE (C1A1):**

The first map starts the player in the control room of the Portal Device. Adjacent corridors take the player through a series of laboratories and holding cells where specimens seized from the interdimensional portal have been kept for study. The player will navigate the area unarmed except for a crowbar, which he may use to pry open doors and airduct grills. Please keep in mind that this map is still in progress. Some switches have been disabled, some doors have been locked in an open position, and other temporary changes have been made to allow free exploration with a minimum of snags dead-ends. Even so, some judicious use of “noclipping” may be necessary in tight spots.

You begin in a laboratory, at the controls of an interdimensional portal. (Disaster FX still to come.) Throw the switch to get into the outer corridors. To your right is a broken airlock. You will need to duck through the broken panel and trigger the opposite door, which is also malfunctioning (a well-timed scurry is necessary to get through the far door). Beyond the broken airlock you will find a view into a room you cannot enter; it's blocked by fallen equipment. Another door leads you down into a power room where you will find a ventilation grill on the floor (look for the violet light). Eventually these grills will be removable with a crowbar; for the moment they will slide open when you touch them. You will have to duck to enter the airduct, then toggle on your flashlight. (To bind a key for this purpose, pull down the console (~ key), and type: bind [key] “impulse 100”.) Switch the flashlight off when you are in bright areas, as it will currently slow down your framerate. Tour the ducts until you reach a dead end with a vertical shaft extending above it. At this point, if you turn to your left and jump, you will be able to scale the shaft and come out into a ceiling duct (it may be helpful to crouch as you step off the ladder. Ahead of you is another grill opening into the room with the revolving beacon. Both doors are blocked, but you can move the equipment away from one, and press on through this level. There is an airlock not far beyond, although triggering it can be tricky; you will need to activate the passcard slot, then hit the lever.

There are labs beyond this. One cannot be entered, although the door will open slightly. The other lab door opens all the way, but the floor is flooded with electrified water. Step right in and you'll be electrocuted. You must jump from table to countertop, then switch off the lights. Now you can get through the door at the back of the lab. From here, you can circle around to the second lab and imagine the fun you'll have with a bunsen burner and some ruptured gas tanks. For now, shooting the wall near the gas tanks will cause it to shatter. (Note that currently maps are not saved in-state; therefore, if you blast out a wall in one area and come back to it after having transitioned to another map, the wall will appear to have been restored again.)

Near a small room containing a High Voltage switch is a stairway shaft that will lead you down to a series of cages. (You can reach these cages sooner by avoiding the broken airlock outside the laboratory, and riding a large lift down to the lower level; but note that once you have stepped off the elevator and allowed the grill door to close, you will not be able to raise the grill again in this version.) Playing with the switches and levers in this area will open the cages in various combinations. You may find that if you enter certain cells, the sewer grates are movable. By jumping into the drains and ducking down, you can explore beneath the cells and reach otherwise inaccessible areas. You may have to “noclip” to get out of the drains, however. (Pull down the console by typing “~” then type “noclip”; you may also

bind a key to toggle this function, following the example shown for the flashlight. Once you are in noclip mode, you can sail through walls and floors by working the mouse combined with the Alt key.)

As you explore the lower area of cells, you will discover an exit (triggered from inside the main green-lit holding room) and an emergency override switch which is accessible via one of the stairwells. Activating the emergency override will open a large door in the subbasement, and you can then proceed to the next map. (A transitional area is not currently in place; you will go directly to an elevator that opens into C1A2...)

## **THE OFFICE WARRENS (C1A2)**

The second set of areas consists mainly of office complexes in a Cold War era style, full of shell-shocked civil servants and their scattered remains. The monsters got here ahead of you, pouring through numerous temporary dimensional rifts that gaped during the disaster. You will see offices, storage rooms, and a cafeteria with an enormous freezer. In some places it is necessary to climb onto crates and couches and then to jump; this will give access to areas above the ceiling, and permit you to get past blocked doorways.

When you begin the level, you will almost immediately encounter a locked door with a small viewing window beside it. The door is sealed, but if you shoot out the wiremesh glass, you can pass through the window. You will need to use a combined jump and crouch move to get through the window; this move will come in handy throughout the game.

Also at the start of this level you will see a locked break-room where a scientist has barricaded himself. Shoot near the fire extinguisher down the hall and you will gain access to an airvent that will take you into the break-room.

Most areas in the office complex may be explored freely, but you will encounter several serious obstacles that require dexterous maneuvering. The first is a locked door with several crates littering the hallway just in front of it. Clamber from the shorter box onto the taller and jump. Now you will have access to the ceiling area. Leap up while moving forward, and you will find yourself scaling a ladder into the ceiling area. From here you can crawl above the sealed door and come down into the next room. (If all else fails, you can noclip there.)

To gain the exit, you will have to reach the balcony that overlooks the large cafeteria room. In one of the small rooms near this balcony, you will discover a grill in the floor which lets you down into the ventilation system. Eventually this leads you out into a very dark room of ductwork. You'll need your flashlight here, and you will also need to do some very dexterous jumping to get up along the tops of the ducts and into another section of ductwork. Through some very solid bars you'll get a glimpse of the Exit—but your crowbar won't be sufficient to let you at it. You will find that a bit farther along you will be able to stand up and enter an area of girders and ceiling tiles. Push a grill out of your way and you can pass across the ceiling by hugging to the girders; beware of the acoustic tiles, which cannot bear your weight. By this route you can eventually drop down into the hallway near the Exit door, and from here you'll gain access to two more elevators. One of these is out of service; the other will open but the car is far below. Make sure you have your controls set for "Run Always" and then leap across the shaft; you'll find you can scale the opposite ladder. By cautiously edging along the interior of the shaft, you must climb each section of ladder until you reach the top of the elevator car. Pry up the access hatch and drop inside, and this will put you into...



## THE SECURITY COMPLEX (C1A3)

With the office complexes behind you, you step off an elevator into a corridor strewn with crates. A door to your right is sealed—clearly, this will be an important destination when you’ve gained proper access. The level is populated by houndeyes and human shock troops who have made their way down from the surface (which is very close at this point). You must fight your way through the troops to an airlock, and beyond that a large area housing an airway shunt control with three colored handles. The air system is accessible through a floor hatch in this same area; you will find it in a small room cluttered with crates. To open the hatch, stand over it and activate the “use” function (bind a key for +use). You can reach numerous otherwise inaccessible areas by following the airshaft, but it is not necessary at this time to solve the duct puzzles in order to complete the level.

Also leading down and out of the main air-shunt area, you will find stairs into a small room where a storage ledge is covered with crates. Climb the ladder up to the ledge and push the button there; this will open the way to a flooded storage area. Following the ramps will take you through a computer center, beyond which sits an immense fan housing. You can get into the airtight system by jumping down onto ducts and opening a ventilation grill in this room. You will also want to get onto the ramp above the large lift, and throw the switch on the catwalk just above it. Leap onto the lift as it rises past and it will carry you to an upper level of the main room. Fight your way along the ramps to another elevator which will carry you to the surface control bunker. (For now you will have to pull down the console (~) and type “map c1a2c” to invoke this transition.) From here you can look out over the dark landing field where a battle between human and alien forces will be staged. In the finished map, the controls in this room will allow you to disable security for the sealed door you saw at the very beginning of the level. The player will then return through the level, having acquired access to that door, and raise the garage door that opens into ruined Silo 2. (Currently, triggering the control-room switch has no effect on the silo entry.)

## Weapons

- Glock 9mm pistol: Medium rate of fire, Low power, fast reload, 12 round magazine. This is one of the first weapons players will encounter in Half-Life.
- MP5 machine gun with grenade launcher: MP5 is a fully automatic, military machine gun. High rate of fire, low power, medium reload, 30 round magazine. The attached grenade launcher does not function immediately: the player needs to find the grenades over the course of the game.
- multiple grenade types: There are 4 grenade types: fragmentation grenades, flash grenades (temporarily blinds opponents), satchel charges (for remote detonation) and tripmines.
- Crossbow: Silent sniper weapon. Makes very little noise when fired and there is no muzzle flash to give away the player’s position. Will fire both standard bolts and tranquilizer bolts. Deathmatch players can fire customizable bolts, so that opponents will be “tagged” with the player’s personal arrow.

- **Gauss Rifle:** This weapon's powerful beam can be modulated by the user: the longer the button is held down, the more charge the weapon accumulates. Releasing the fire button discharges the weapon. The beam is capable of vaporizing any living organism and will penetrate multiple creatures, stopping only when it hits a solid surface.

## New Technologies Behind *Half-Life*

The next step in the evolution of 3D first-person action games, *Half-Life* combines the most advanced, proprietary technology with genre-breaking gameplay elements.

### Improved rendering technologies using 16-bit color

One of the most noticeable limitations of first-person shooters has been their 8 bits per pixel (bpp) color quality. The result is monotonous, unrealistic lighting and color that adds little to the gaming experience. And, even though an accelerator can improve the appearance of 8-bit games, they cannot expand an 8-bit game's color palette beyond the original 256 colors.

*Half-Life* is engineered in 16-bit color, which expands the available palette to 65,535 colors. And, with support for graphics acceleration, *Half-Life* lets those with advanced hardware see over 16 million colors. The result is greatly enhanced realism and visual richness. Specifically, 16-bit color makes the following innovations possible:

**Realistic lighting, translucency, and blurring** Thanks to those 65,535 colors per image, *Half-Life* engineers can blend light and color in innumerable ways to get a variety of effects. Examples include smoke, metallic surfaces, translucent water and energy beams—even force fields that can fade in and out. Different colored lights from different sources will blend properly as they pool on a floor or wall. And because these features are implemented in software, they can be made an integral part of the gameplay experience, not just a visual treat for those with advanced hardware accelerators.

**Dynamically changing surfaces** Surfaces in *Half-Life* are dynamic—they can change over time or as the player interacts with them. Damp walls may grow mossy, water will ripple as the player moves through it, and hard surfaces will retain the scars of a previous firefight.

**Non-organic monsters** With realistic surfaces, monsters aren't limited to being organic creatures. They can evolve into hybrids of flesh and metal, for example. The realism of the reflections can provide useful feedback to a player, too, such as whether that monster's metal breastplate is made of penetrable aluminum or impermeable steel.

### Improved technologies for monsters: skeletal animation

Hand-in-glove with a demand for realistic lighting and color effects is a desire for monsters that look and move as realistically as possible. To accomplish this goal, the engineers at Valve have created a skeletal animation system for monsters. Rather than store a discrete set of polygonal meshes for each key frame of animation, as traditional action games do, the skeletal system moves the "bones" within a monster and deforms a mesh and texture map around them.

There are a number of advantages this gives *Half-Life* animators as they build more compelling and complex monsters:

**Smoother and richer animation** *Half-Life* players will see much smoother animation than in typical action games. While both sprite- and mesh-based animation systems are based on a fixed keyframe animation rate, which is typically targeted at the lowest common denominator system, *Half-Life*'s skeletal animation system does not limit the number of frames in an animation. For instance, a typical walk cycle may have as many as 80 frames in *Half-Life*, as compared to only 4 in some sprite-based games.

**6000+ polygon monsters** With Valve's new skeletal system, monsters can be much more complex than ever before—without affecting performance. *Half-Life* will have monsters of up to 6000 polygons, compared to the 500-polygon monsters in traditional mesh-based games..

**Anatomically correct motion** Through skeletal animation, motion can become more realistic and natural because the animation doesn't depend on thousands of interactions of mesh vertices that are difficult to map in all permutations. The faster a character runs, for instance, the faster the legs will move.

**Multiple animations, compound animations and switchable body parts** Because skeletal animations are more economical, *Half-Life* has many different animations per creature. And, rather than have a fixed set of animations that involve a monster's entire body, Valve can build animations of many different parts and then combine them into a whole. Monsters can turn their heads to look at the player while they are running. Troops can pull out weapons and fire while they are moving or kneeling. Compound animations also make it possible to remove or switch body parts in response to the gaming action—say, to allow for a weapons change or to show damage to a monster that's still fighting.

### **Improved technologies for monsters: artificial intelligence**

Valve has created a technology that imbues *Half-Life* monsters with tactical intelligence, multi-character cooperation, and a supreme will to live. The result is a menagerie of new creatures whose intelligence and unpredictability make them truly formidable adversaries.

Traditionally, game AI is a set of hard-coded *if-then* decisions for every possible situation that could confront a monster, such as, "*If* there is a bad guy in this room *then* shoot at him." Valve took another tack, designing a module-based AI system that provides practically infinite flexibility and monster growth potential. Below are just a few of the ways that AI decision modules work together to produce unprecedented monster intelligence.

**Monster behavior based on player's actions moment by moment** In *Half-Life*, monsters might advance only when it makes sense to. They assess how much health the player may have, where the player is heading, how many of their own kind are left in a room, and whether they have enough health themselves to fight. Such conditions and others dictate whether a monster will chase, attack, or retreat. While in other games monsters are basically suicide squads, in *Half-Life* monsters don't want to die.

**Squad (group) behavior** Valve's module-based AI technology also adds the new twist of squad behavior and cooperation among monsters. Adversaries can make a threat assessment, recruit others and then plan a coordinated attack against the player.

**Flocking behavior** Achieving realistic motion for creatures that travel in swarms, flocks, or packs is just as important as achieving it for those that move individually. To do that, Valve has crafted an innovative Flocking Behavior Model that realistically depicts the organic movement of animals such as birds and fish.

**Multi-sensory monsters** *Half-Life* monsters possess a rich and varied group of senses for detecting a player's presence—namely, sight, hearing, and smell. For instance, some monsters can't see at all, but locate the player by sound. Others have the ability to track the player who has moved on by using a scent trail. This forces players to rethink their tactics and weapons choices.

### **Improved technologies for more exciting gameplay**

Valve thrusts players into a full-surround gaming environment that is its own thriving space. *Half-Life* has an ecology and a society. Monsters are breeding, herds are forming, and some monsters prey on others. Players are dropped into the middle of this environment and must learn from what they see. In order to survive, they must use both their weapons *and* their wits. Some examples of innovations that enhance the player's gameplay experience include:

**Continuous-world experience** Instead of discrete levels that offer no chance of turning back, *Half-Life* lets players return to any space they've visited—though what has happened in that space in the player's absence may be surprising

**Usable vehicles and props** Valve's designers have made sure that vehicles and props aren't merely backdrops to a story—they are tools that must be used to advance in the game. For instance, an underground train system takes players to numerous stations and allows them to backtrack. Some vehicles also contain, or can be used as, weapons to mow down monsters.

**Ducking, crouching, and crawling** For more realistic and varied action, *Half-Life* lets players duck and crawl in addition to stand, walk, run, and jump. In addition to expanding players' tactical options, being able to duck and crawl opens up myriad spaces once sealed off to first-person shooters, such as a maze of duct work which can be used to help elude monsters or reach otherwise impossible rooms.

**Improved physics** In *Half-Life*, physics and gravity behave more like in the real world than in other. Flooring can be unstable and rickety railings can give way. Even typical tactics for obliterating the enemy must yield to Newtonian physics. For instance, blowing up a soldier who's wearing a backpack of desirable goods also destroys the goods. An initial surprise to experienced gamers, it will challenge players to dream up some interesting alternative solutions.

**Scripted sequences to advance the story and interact with** Rather than jar players out of their immersion by plugging in backstory details as a voiceover or text screens between levels, Valve's new scripting technology reveals information through sophisticated scripted animations that can be deliberately or accidentally interrupted (such as by shooting at a character or bursting into a scene in progress).

**Multi-player games of up to 32 players** *Half-Life* lets up to 32 players to play at once, and it has the ability to support spectators. Other features include support for game setup, server filtering, and related Internet functionality.

### Improvements in sound technology

Sound cues are often a gamer's best reconnaissance and orienting tools, and Valve has made sure that *Half-Life*'s sound technology provides the same quality and feedback reliability as its light, color, and other realism effects.

**Real-time DSP** Valve has created a proprietary method for producing DSP (digital signal processing) in real time. Without the DSP functions, effects would sound the same in a small hallway as in a wide open space. With DSP, however, a sound effect is muffled underwater, is deadened in a fabric-padded space, and reverberates in a very large room. DSP affects every sound a player makes or hears, such as shots and grunts or machinery and monster noises.

Valve's implementation of the DSP technology also saves disk space and memory. *Half-Life* can reuse the same effect but give it very different sounds based on the geometry of the room rather than have to record a separate WAV file for each type of effect.

**3D sound** For any sound they hear, players can tell which direction it is coming from—left, right, below, above, in front, or behind. The source direction changes as they move through the space (e.g., engines that were revving on the left will sound off on the right when a player turns around), and constant sounds recede as players get farther away

## Multiplayer features in *Half-Life*

### Revolutionary multiplayer functionality for the mainstream gamer

E3, Atlanta, GA. - Valve L.L.C. and Sierra Studios today unveiled a collection of innovative multiplayer features for *Half-Life*, the highly anticipated 3D first-person action game and debut release from Valve. The new features, intended to broaden the appeal of multiplayer action gaming to a wider gaming audience, are being showcased for the first time at the 1998 Electronic Entertainment Expo, held in Atlanta, GA May 27 through May 30. *Half-Life* will be featured at the Sierra Studios section of the Cendant Software booth (#1651, East Hall).

"With the multiplayer functionality in *Half-Life*, we are going to make action gaming on the Internet a lot more fun and a lot less frustrating to the mainstream gamer," said Scott Lynch, Senior Vice President of Sierra Studios.

The multiplayer features of *Half-Life* that will be shown are:

#### One Button Play

Gamers will be able to be up and running in a multiplayer game with the press of a single button. There will be no configuration hassles, no IP addresses, and no need for additional utilities or patches. The *Half-Life* launcher will automatically connect to the Internet, locate the master server, select an appropriate low-ping game, download any resources necessary to play, and launch the game.

#### Find Your Friends

With *Half-Life*'s integrated communications and searching facilities, gamers will be able to find their friends no matter where they are on the Internet, get together, talk to each other, and then jump into a game together. It's also easy to set up a private game that only you and your friends can play.

### Be Yourself

Anonymity is a thing of the past with *Half-Life*. As part of customizing the appearance of their onscreen character, players can scan a picture of themselves onto their computer and have that appear as their character's face in the game (and on their opponents screen). Members of clans can spray paint their clan logo or other bitmap on the opposing teams territory to let them know who's really in charge. A master server keeps track of your accomplishments and standings versus all of the other *Half-Life* players.

### Lag-friendly game design

For many players new to the Internet the amount of time it takes for information to travel back and forth across the Internet, known as lag, can make the fast pace of action gaming very frustrating. By the time the server has registered a fire command, the target has already moved. *Half-Life* addresses this by designing for lag. One example of this that will be shown at E3 is one of the weapons, the Snark, a fire-and-forget organic grenade that is completely independent of the player's ping time.

### Cooperative and Competitive scenarios

Many mainstream gamers are interested in both the competitive and cooperative aspects of the multiplayer experience. *Half-Life* will contain both head-to-head and cooperative scenarios.

### Auto Download and Configuration

Even experienced gamers can be frustrated by the complexities of downloading new maps, placing add-ons into the right directories, and knowing which of these should be used with which servers. *Half-Life* makes all of these operations automatic and completely transparent to the player. If a player connects to a server, and the server administrator is running a *Half-Life* game that requires new sounds, new models, new maps, or additional DLL's, all of these will be automatically downloaded and configured for the user.

## 24 by 7 Server Support

Players will no longer have to worry if their favorite *Half-Life* game or map is available. With free support from WON.Net, they will be guaranteed that all of the popular levels will be available at all time, with nothing more than a WON.Net registration. A master server will also keep track of all available servers running on the Internet, which games they are running, all standings and scores, and what servers offer players the lowest ping times,

### Additional Features

In addition to the above, *Half-Life* features 32-player Internet and LAN multiplayer support. Servers are available via WON.net, Gamespy or user hosted servers. *Half-Life's* skeletal animation system lets players see which weapons opponents are using. *Half-Life's* dynamic environments add to the realism and chaotic fun: burn marks, bullet holes and blood marks appear on surfaces. Multiplayer levels include player-controlled trains and conveyer belts, which offer creative means of offense and defense.

Voted "Best Game at ECTS" by All Games Network and winner of "Best Action Game" and "Best Take on First-Person Action" in Gamepen's "Best of 1997 E3 Awards", *Half-Life* combines the most advanced, proprietary technology with genre-breaking gameplay elements to create the next revolution in computer gaming.

## Half-Life Preview Update

Half-Life missed its original release date way back, and much has been happening in the time since. We went back to the Seattle office and talked to the team to find out just what's been going on with the game in the last couple of months so we could

bring you this update to our exclusive featured preview.

## New Toys and Additions

Valve has requested that we not talk about the most exciting development in the environments (something about the competition and not wanting them to get any big copycat ideas), but there are a number of other very cool things happening.

Seamless level transitions have consumed hundreds of programmer hours. Now you can fire across levels, shooting a monster in the next level while you're still in the first one. And monsters will travel from one level to the next right alongside you. You run, run, run, pause momentarily while the next level loads, and keep running. If you fire at a monster just as you're crossing into a new level, the bullet/flame/laser will continue traveling into the new level and kill the monster.

Lasers have been improved drastically and will be used as trip wires to unleash gun turrets, laser sights on guns, and tracers that rockets follow intimately for accurate and precise explosions. And when you're building your world, you can now use decals to demonstrate just how big those explosions are - there are decals for cracks to be used on walls, decals for blackened disaster to show just where a rocket has been, decals for blood, bullet holes, and all manner of gore. They come with WorldCraft and are as easy to lay on the ceiling as the other kind of childhood decals were to stick on living room furniture.

One that everyone seemed particularly proud of is the helicopter. Or rather, helicopters. You are capable of commanding an air strike in this new and improved Half-Life, and you'll need something to command. The story goes something like this: One day John Gutherie was monkeying around and created a remarkably cool object. He showed it to Valve cofounder Gabe Newell, who was sufficiently impressed as to offer dinner at a swanky Seattle restaurant to anyone in the office who could figure out the best way to implement it into the game. Marc Laidlaw (writer), Kelly Bailey (sound), John Gutherie (programmer), and Ken Birdwell (programmer) thought of a puzzle linked to the air strike and won.

But back to the helicopters. The Osprey helicopters can be used to shoot targets down below and can likewise be shot at and exploded from below. Control is crisp and clean. "The best outside a sim," Newell boasts with pardonable pride. The rudders flip up and down - taking advantage of Half-Life's skeletal animation system - and grunts lower ropes and slide themselves down to the ground from the air.

When battling grunts, you'll have the advantage of a special bodysuit. It talks to you. It tells you when the radiation levels are frighteningly high, kindly injects you with morphine when you're wounded, and warns you when your health is low. Kelly Bailey, Half-Life's official sound guy, has been working on the suit's speech, among other things, and compressing the memory-hoarding sound files.

Compressing the suit speech is a process similar to that which Bailey uses for most speech in the game. He breaks sentences into component parts, then uses the parts as building blocks to create individual sentences. Rather than save four hundred separate sentences, Bailey need only save parts, then build from them. It saves a tremendous amount of memory.

The sounds are often clues to what's about to happen to you in the game. For instance, when the action track is triggered as you step on the elevator, "by the time you get to the bottom, you should have your gun out," Bailey says. But to keep the tracks from getting too repetitive, you'll hear a track once, as your clue, and then it

will stop "to preserve the emotional impact." It won't go on indefinitely repeating itself - a quality that should be appreciated by gamers, especially if they end up playing Half-Life half as much as Valve hopes.

## Original Half-Life Gamespot/Preview

The best reason is that you can spray paint on walls. But there are a number of other reasons Valve Software's first-person shooter Half-Life is a contender: 24-bit color, great animation through Valve's skeletal animation system, a judicious blend of strategy and blood, good monster AI, Quake engine-based, and solid storyline. Half-Life looks like it's gonna have it all - and then some. This is not your father's Quakemobile.

But back to the spray painting - you can spray your clan logo on walls, vehicles, Coke machines, and enemy lairs. And on opponents' corpses "just to really annoy them," adds Gabe Newell, cofounder of Valve Software. This is taunting at its finest and multiplayer play may just never be the same.

It will be a little while yet before you can perfect your graffiti style. Half-Life was scheduled to come out sometime next month, but as often happens in the gaming world, it was delayed. When we visited Valve's offices in Kirkland, Washington (just outside Seattle), last week, the developers were still cruising along, redesigning monsters, adding wave effects to water, and making the game's trains run smoother - figuratively and literally. Following is up-to-the-minute information about monsters, levels, and the story, along with interviews with the development team, a behind-the-scenes peek at the making of the game, and brand-spanking-new art in this GameSpot exclusive preview.

## The Story

"We tried to shape the game in such a way that you keep going through these levels of realization that everything's a little different than your assumptions about it." That's Marc Laidlaw, science fiction novelist and Half-Life storyline author, explaining the moving force behind Half-Life's story. "When you first start the game you know nothing, which fits your character's profile - he's an engineer, some sort of research assistant, working on a project testing devices. He doesn't know where they come from, doesn't know much about them. He doesn't have clearance to any of the real security areas." All he knows is that he's doing technology research for the government.

One day the scientist - you - powers up the latest device to arrive in the lab and things really start to go wrong. The device sputters and sparks and a wall suddenly melts away. You're now staring through an enormous hole and into an alien world. The aliens are standing around a device exactly like yours - also sputtering and sparking - aghast at both the malfunctioning machinery and the break in space-time. Energy runs amok, beams of light shoot everywhere, and the next thing you know an alien gets zapped over here and your coworker gets zapped over there. And that's the beginning of the disaster.

Before you know it, the area around commences to disintegrate and your first task is simply to survive the ensuing mayhem. You wander through the decommissioned missile silo that houses your lab, trying to find a way to the surface, all the while seeing aliens make mincemeat of your colleagues. And remember that you're a scientist: You've got a lab coat, not the heavy-duty artillery necessary to battle visitors from another planet.

When at long last you see government troops arrive, you're relieved. Momentarily. The troops unfortunately and inexplicably begin executing scientists. In other words, Laidlaw says, "The cavalry has arrived and it's out to get you."



So the aliens are out to get you, the government clean-up crew is out to get you, your colleagues are dying by the dozens, and you have absolutely no idea what's going on. Time to figure some stuff out. "We're trying to structure [the game] so that you get a lot of different ideas about what's going on and not spell everything out overtly, but just leave some of the things for people to figure out and make up their own ideas of what's happening and what's going on," Laidlaw says. "Some of it is really tightly structured - like animated sequences. But there's a high level of unpredictability. "

And unfortunately, the more you figure out and the more you learn, the more dangerous you become to all sides involved - and the more they want to kill you.

## Monsters

Really gruesome monsters abound in Half-Life; out of the dozens, we've picked a

few to show you just what you're up against.

**Crab** - It's mean, it's ugly, it looks like a fat, deformed, decapitated chicken. It jumps on your head ("head crabs you" in Half-Life parlance), tucks metallic-spiked legs into you, and snaps your scrawny little neck - all in about the time it takes to blink. But the best part is that after it has done away with you, the head crab turns you - or any human compatriot it attacks - into a zombie. In other words, if you don't keep the head crab population down, not only do you leave yourself open to chance attacks, but you'll also find that you have fewer human friends and quite a few more zombies wandering the hallways.

**Alien Grunt** - This guy looks like a linebacker with armor on and has one crazy arm sticking out of his stomach. Everything on him moves - the crazy arm, the snapping jaw, "even his toes can wiggle," notes 3D artist and illustrator Chuck Jones. He's also got organic weapons by the boatload (i.e., things like missiles simply grow on/from him), and his projectiles track you around corners. You have to shoot the darn things out of the air in order to avoid painful damage. He's also a big fan of communication; as soon as he sees you he's going to give the heads up to his alien buddies and they'll come running.

**Houndeye** - These guys are really fast, they have a sonic attack, and they travel in packs. And while you may think that killing one little guy isn't so bad, just wait 'til a couple more arrive and they begin to hunt you in earnest - the damage they do is exponentially related to how many of them there are. Since their attack is sonic, you'll be able to hear them. If there's just one, you'll only hear one note. Put a bunch

together and you've got a symphony of death.

**Chum Toad** - As Jones puts it: "We're trying to think of 101 ways to abuse the chum toad." They're the lowest form of alien life and lots of the other aliens stave off hunger pangs by munching chum toads, which, by the way, have tongues that roll out and wiggle when they die. You'll likely find the toads useful - throw them across a room with a gun turret and you can direct the turret's fire at it instead of yourself. Or throw it to a monster that's more interested in eating than killing and a chum toad may just save your life.

**Barnacle** - It drips one slimy tentacle from the ceiling and if you're not paying attention to what's above you, well, you've left yourself wide open to getting sucked up and crunched up by barnacle teeth. There's some discussion among Valve designers right now about whether or not the barnacle should eat you whole or simply bite off your head and drop your bloody body to the ground, but either way, it won't be a very pleasant experience.

## Characters

But it's good to know that you're not completely alone in your quest. Periodically you can enlist the help of some of your fellow humans...

**Barneys** - These security guards are your friends. Tap them on the shoulder and they'll follow you around and around, wherever you go, fighting monsters that attack you on the way. Named for their resemblance to Barney Fife of Andy Griffith fame, Barneys may not be bright but they're awfully handy.

**Scientists** - They're cowards. There's no doubt about it. Fire a gun anywhere near a scientist and he'll get a terrified look on his face and start screaming. (You're the only brave one of the bunch.) But however annoying they may be, it's just not a good idea to shoot the scientists. You can get through the game without them, but if you keep them alive, you just might find that they know a lot of useful information - about opening locked doors, for instance.

There are literally dozens more monsters and characters, some of them still being developed, others just getting tweaks. A couple that will be worth watching for are the female scientist (there are a few women in the game) and the female assassin, one of the toughest characters - she's loaded with weapons and AI.

## Levels

Working to create a more realistic feel, Valve shaped levels that transition smoothly from one to the next; there's no Quake-ish jump from world to world. When you cross from one level into another, you stay in the same hallway - you just have a short load time before you can keep running. Though some levels are one-way - meaning once you leave them you can't go back - most are open and you can run through them as often as you like.

Though Half-Life is based on the Quake engine, levels are much lighter than those you'll find in Quake. The Valve team likes browns, but also reds, blues, yellows, and greens. You'll be able to see clearly not only through water, but also through the doorway in front of you. You do start off, after all, in a research laboratory, and scientific labs tend to be brightly lit.

Half-Life will ship with the level creation tool WorldCraft and a number of prefab objects (an ugly plaid couch that looks exactly like the one found in every college dorm room included), so enterprising gamers can build their own levels for multiplayer play.

Here are a couple of the initial levels:

**The Portal Device** - You've been popped through the portal device and landed feet first in the portal control room. You've got no weapons, save a crowbar, which, if you're smart, you'll use to pry "stuff" open. Run around a little and you'll discover that you're not the first to pass through the portal. In fact, there seems to be a number of folks kept as specimens for observation and study floating around. As

you're wandering, check for grates and ducts - remember you have a crowbar and

crowbars are meant to be used.

**The Office Warrens** - There are monsters everywhere in this bleak environment. You're surrounded by office complexes in that drab, depressing style, and they're filled with drab, depressing civil servants. Jumping and crouching is key to this level, as is figuring out how to climb onto difficultly placed elevators. Oh, and a tip:

If you see a ladder, climb it.

**The Security Complex** - The Security Complex is where you'll find the door to the Silo - you can't get in just yet, but remember where it is. You're going to battle through tons of shock troops en route to an airlock just the other side of them. This is a level of catwalks - climb up to them any old way you figure out (two words for you: air and duct). And don't forget to do something about those big, ugly fans that will make mincemeat of you in mere instants.

## Weapons

It goes without saying that you can't have a shooter without things to shoot with. Valve is in the process of tweaking and refining a number of its weapons, but here

are some of the basics.

**Gun Turrets** - There are big gun turrets and little gun turrets, but both can kill you. They're motion sensitive and will follow your movements around an area, spraying bullets at you with alarming accuracy. This might be a good occasion to find a chum

toad and abuse it.

**Crowbar** - Guess what? This is what you start out with. And it's all you start out with. Valve wasn't crazy about just randomly locating weapons throughout levels for you to pick up - it didn't make much real-world sense - so you're going to have to kill somebody with the crowbar and pick up his gun if you want something that shoots. Of course, you can also use the crowbar for more practical things - like prying open

air ducts and such.

**Pistol** - It's just what it sounds like. The pistol is one of the simpler weapons, but it does the job if used effectively. Weapons also require reloading and ammo is not unlimited in this game, so factor both those into your attack plans.

**MP-5** - It's smoother, faster, and more powerful than the pistol but its reason for existence is the same - killing aliens and evil government agents.

**Spray-Painter** - The pen is mightier than the sword, right? This really doesn't kill anything and isn't exactly a weapon, more a tool for taunting enemies. Vandalize slain carcasses of multiplayer friends by spraying your own personal insignia, a clan logo, or a friendly little message ("Die"). Enemy lairs are also excellent targets for graffiti. Other planned weapons include a flamethrower and a grenade launcher. All leave permanent damage on walls, floors, and other surfaces, so feel free to wander around and survey the damage you've done at any time.

## Technology/Artificial Intelligence

"One of the things that we thought when we were building the game," Newell says, "was that the single-player games had gotten pretty tedious. In the sense that the first time in the Castle Wolfenstein or Doom or Ultima Underworld that you saw a monster and it saw you and turned around and started coming at you, that that was just amazing. But the monster behaviors now, several years later, [are] pretty much the same: Basically what happens is that the monster sees you, it rotates toward you, it advances, bumping into walls, getting stuck on corners, and then starts throwing whatever its ranged attack is at you. That," Newell explains, "just seemed really dull."

Valve wasn't in the least interested in making a dull game, so it worked hard on monster AI. Granted, there are still some really stupid monsters that do really stupid things, but those are "by choice," Newell points out. "We also have really intelligent monsters - monsters which breed, monsters which run away. We have monsters which work in groups. We wanted to have just a much more complicated set of behaviors."

If the monsters themselves are straightforward enough, they are so many and so varied that your strategy for beating them certainly has to be complex. And aggressive. Hide behind a thick wall or a stack of boxes and the monsters will start lobbing grenades at you - to smoke you out, so to speak. This game is not for the timid, or for the campers. Sit back and try to play a defensive game and you'll very likely find yourself full of grenade shrapnel.

The monsters themselves vary a great deal in their attacks; some prefer eating to killing (low on the AI scale), others have a sense of smell - and no sight - and can track you from one end of a level to the other. In consequence, you have to be very aware of where and when you run through hallways - a monster could pick up your trail and follow you at any stage and you won't even know he's after you till he's right on top of you. The same holds true for monsters with keen hearing - play noisily and they'll figure out just where you are and the fastest way to you.

Other monsters travel in packs and their damage is directional proportional to their numbers. Some monsters will physically call to others of their kind when they catch sight of you (bad government guys) and some will announce your presence telepathically to compatriots. What's impressive is watching them follow you - corners don't discourage them, neither do doors nor platforms. Run up some stairs around a corner, into another room and across a platform and you'll find that the monster keeps up just fine.

## Technology/Skeletal Animation

The monsters can be as smart as Einstein with bloodhound-like tracking abilities built in, but if they can't actually move, neither of those qualities is going to do them much good. And if they don't move with a little grace and a whole lot of style, gamers aren't going to be very interested in them.

Valve developed something it's calling skeletal animation. Essentially, the idea is that each monster is constructed of individual "bones," which are independently manipulated by artists. So when an artist wants to open and shut a monster's eyes (the big red skin flap covering the houndeye's bug eyes comes immediately to mind), all he has to do is rework the eyes; he does not have to reanimate the entire monster. This allows for an exceptionally high number of animations per character. Mouths open and shut with horrifying intensity, scientists' terrified eyes grow wide in horror, wrists and elbows move with alarming smoothness. "Their mouths are actual objects that will stretch open. We can replace the textures on the faces. So if he's got mad eyes, then the next second he can have happy eyes or scared eyes," says Chuck Jones. "It's just like animating in 3D Studio. I don't ever want to go back to sprites again. Ken [Birdwell, the skeletal system developer] is my hero."

Newell is really pleased with the skeletal system as well - and for obvious reasons. "Rather than having a bunch of sort of static surface snapshots of animations, you can get much smoother, more realistic animations by just having the internal bits of a monster moving. You can smoothly transition between animations and get much higher frame rates on your animations. Joints deform correctly. You just couldn't do this with traditional vertex animation."

Another advantage is that the animations are much more compact - about ten times as compact as they would be using traditional animation. Consequently, monsters with as many as 6,000 polygons populate the levels. And since the game runs in 24-bit color (when it's hardware-supported, 16-bit in software), the monsters, as well as the rest of the game, look exceptionally good.

## Company Backgrounder

### OVERVIEW:

Valve was founded in 1996 by Gabe Newell and Mike Harrington and is based in Kirkland, Washington. Valve is self-funded. All full-time employees have equity in the company. We don't have a company mission statement, although "we should have better things to do as a company than worry about mission statements" comes to mind. Members of the staff have come from the states of Florida, Virginia, California, Washington, and New York, and the countries of Texas, Canada, and England.

### PRODUCTS:

Valve's debut game release, *Half Life*, will be published and distributed by Sierra On-Line in November 1997.

### ABOUT THE VALVE TEAM:

#### Gabe Newell

#### Founder/Managing Director

Gabe held a number of positions in the Systems, Applications, and Advanced Technology divisions during his 13 years at Microsoft. His responsibilities included running program management for the first two releases of *Windows*, starting the company's multimedia division, and, most recently, leading the company's efforts on the Information Highway PC.

## **Mike Harrington**

### **Founder/Director of Development**

Mike spent the last nine years working as a developer or lead developer on *OS/2*, *Windows NT* and *Microsoft Bob v1* and as a development manager on *Microsoft Bob v2* and *Microsoft News Viewer*. Prior to joining Microsoft, Mike worked as a developer at Dynamix where he worked on a variety of Sports titles for GameStar/Activision.

## **Harry E. Teasley III**

### **Game Designer/Level Designer/Artist**

Harry joined Valve from Shiny Entertainment in San Diego, where he was finishing up an unannounced adventure game. Prior to Shiny, Harry was at Williams Entertainment where he art directed the PlayStation *Doom* release (both the 50 level original release and *Final Doom*), and *Doom 64*. Before Williams Entertainment, Harry worked with Sid Meier at Microprose on various releases of *Civilization* as well as *Pirates Gold*.

## **Chuck Jones**

### **Illustrator/3D Artist**

Chuck joins Valve from Apogee/3D Realms where he was an artist and animator for *Duke Nukem 3D*, *Rise of the Triad*, *Shadow Warrior* and, most recently, the *Duke Nukem Plutonium Pack*. Formerly a tattoo artist, Chuck tagged Jerry Cantrell of rock group Alice In Chains long before he created the space aliens who invaded Los Angeles.

## **Ted Backman**

### **Art Director/Conceptual Artist/Illustrator/Animator**

Ted has been a freelance artist and animator in the Seattle area for the last four years. He is also a black-belt karate instructor.

## **Ken Birdwell**

### **Senior Software Development Engineer**

Ken's 15 years of software development include a wide variety of projects including in-circuit emulators, 3D surface reconstruction, and satellite networking. He wrote one of the first graphical shells for multiplayer on-line games for Compuserve, *Sniper*, and, oddly enough, has a BFA from Evergreen, where he studied painting, photography, and animation.

## **Ben Morris**

### **Tools Architect**

Creator of *DCK* (*Doom Construction Kit*) and *WorldCraft*, the definitive *Doom* and *Quake* level creation tools.

## **Gregg Coomer**

### **Game Designer/Art Director**

Gregg has worked on a variety of graphic design, multimedia, and web projects at both Nintendo and Microsoft. With eyes open and turned forward, he has led the design of Valve's corporate identity.

## **Kelly Bailey**

### **Senior Software Development Engineer/Musician/Level Designer**

Kelly, formerly a product unit manager at Microsoft, has a programming background that includes consumer multimedia, database engines, and networking. He is also lead singer for a Seattle band, *Lucy's Fishing Trip*, and, therefore, shaves less than the rest of the staff.

## **Stephen Hecht**

### **Senior Software Development Engineer**

Another long time Microsoft coder, Stephen writes all the hard bits that scare the other programmers.

## **Dario Casali**

### **Level Designer**

Joining Valve from England, Dario is a world-famous level designer. His work includes some of the most popular deathmatch levels on the Internet, culminating with *Final Doom*, published by id Software.

## **Steve Bond**

### **Game Designer/Engineer**

Having made the great trek westward from Fort Walton Beach, Florida, Steve most recently worked on the *Quake Airplane* and *Quake Kart* projects—two innovative games that demonstrated the flexibility of the QuakeC development environment. Before that, Steve worked at a local Internet service provider and delivered pizza, a fact that we rarely let him forget, even in his corporate bio.

## **John Guthrie**

### **Game and Level Designer**

Along with Steve Bond, John started the influential and popular Internet gaming site, *Quake Command*. John was also the co-creator of *Quake Airplane* and *Quake Kart*. Today, he occupies Valve's darkest office, where he is hard at work constructing the chambers and corridors of *Half Life*'s treacherous missile base and underground train system.

## **Karl Deckard**

### **Game Designer**

Karl comes to Valve by way of Nintendo, where he was responsible for graphic design and production on *Nintendo Power Magazine* and several player's guides. His thorough familiarity with paper-based role-playing games, wargames, and CCGs, combined with his knowledge of PC and console video games mark him as Valve's quintessential game fanatic.

## **Brett Johnson**

### **Level Designer/Composer**

Brett's craftsmanship as a musician is matched only by his ability to create traps which snare, snag and frag unwary explorers in 3D environments. Valve lured Brett mid-way through his final year at RPI and a promising career in biochemistry. A hard-assed New Yorker, Brett continues to deny Seattle's claim to being the birthplace of espresso.

## **Karen Laur**

### **Illustrator/Texture-Maker/Artist at Large**

Karen has contributed to *Castle Infinty*, *Zork Nemesis*, and *Eastwood* and was the sole creator of *Materia Prima*, a texture collection published by the Valis Group. She was head designer for Maya Romanoff, a prestigious producer of hand-made wallpaper, and was also owner/operator of the Washington DC restaurant, Dante's.

## **Randy Lundeen**

### **Level Designer/Graphic Designer**

Randy comes to Valve by way of Microsoft, where he worked as an interface designer for the Internet Gaming Zone. In his distant past, he was a key staff member at a potato processing plant (his responsibilities including peeling and potato quality oversight).

## **Duncan**

### *Developer/Musician Level Designer*

Duncan refuses to tell us his first name. We have suggested "Monty". Duncan is a genuine sociopath who has collected more ears in *Diablo* than anyone else in the company.

## **Dave Riller**

### **Level Designer**

Prior to joining Valve, Dave was an active developer in the on-line Quake community, and worked with id Software on the deployment of Quake World. For his day job, Dave was a program designer/analyst at MSI, a Windows software developer located on the East Coast, and also ran their website. Dave has been a beta site for Doom 2, Hexen, Quake, and Warcraft II. In his virtually non-existent spare time, Dave is a pilot and musician.

Collectively, the Half Life team has contributed to the creation of the following titles:

Aces of the Pacific

Bat's Entertainment



Castle Infinity  
Civilization  
Countdown  
DCK (Doom Construction Kit)  
Doom Special Playstation Edition  
Double Dragon V  
Dr. Floyd's Desktop Toys  
Duke Nukem 3D  
Duke Nukem Plutonium Pack  
F-15 Strike Eagle  
Fling!  
Fun 'N' Games  
Gunship 2000  
Materia Prima Texture Library  
Microsoft Bob  
Microsoft Excel  
Microsoft Windows  
Microsoft Windows NT  
Microsoft Word  
Muppets Inside  
Nintendo Power Magazine  
OS/2  
Pirate's Gold  
Quake Command  
Rex Nebular  
Rise of the Triad  
Shadow Warrior  
Star League Baseball  
Star League Basketball  
Stellar Fire  
Sting: All This Time  
Take-A-Break Pinball  
WorldCraft  
Zork Nemesis

## “What Not to Talk About”

Following is a list of the features we will NOT reveal to the public before shipping Half-Life. They fall into 3 categories: alien world stuff, puzzle spoilers, and miscellaneous.

### Characters

Kingpin

Alien controller

Big Momma (won't show the finished model)

Gargantua

Alien slave (with control sphere)

Gman

Bloaters

Human loader machine

Leeches, flies, roaches (these can be talked about as ambient creatures that help us achieve more realism, but we won't show the models or talk about specific behaviors)

### Weapons

The only weapons we WILL reveal are:

Crowbar

Glock

Colt Python w/ laser

MP5

Crossbow

Do not talk about the other weapons. However, it's fine to say something general, like we've got cool experimental energy weapons and alien weapons. We just don't want to reveal specifics.

### Powerups

We won't reveal any of the powerups. Again, it's fine to talk about the fact that we have unique powerups that are relevant to the environment and the storyline. Furthermore, please DO emphasize that we are doing everything we can to make the environment as realistic as possible. Therefore, weapons and powerups won't be spinning in the air. You'll find them where they make sense: in a cabinet, desk drawer, hand or pocket of another character, for instance.

### Gordon's suit

We will be showing images of Gordon in his suit, largely because it's important to build some equity in this character. And we can talk about his suit in general terms: it provides armor, it uses powerups and it gives the player status updates. Let's avoid talking about the fact that it will speak to you.

### Technology

NPC mouth movement. We will not show this or talk about it to the press. But we probably will include it in the promotional video that will be mailed out around the ship date.

Smoothing groups. This isn't something the average user will care about or understand without a lot of explanation. There's no good reason to reveal it.

Ambient AI behaviors. We will show these in the video but not before. However, it is fine to talk about the fact that we have these kinds of creatures (since we already have). Don't give too much detail, of course.

**Puzzle pieces**

*We won't show any extended puzzle-solving sequences, and you shouldn't talk about them. However, we will show isolated pieces that demonstrate how you can and should interact with the environment. These include smashing glass and boxes, using the box conveyor, switches. And we may show single images of the purple crystal, but we won't explain its purpose in detail.*

**Levels**

We won't show any of the alien world. That entire part of the game should be a total surprise. We will be able to take screenshots of everything else except the final portal effect and end game effects. This doesn't mean we will show every other level, just that it is OK to. In moderation.

**Story**

Marc is the keeper of the story. If anyone asks you for a synopsis, refer them to him.